



SEQUENCE LISTING

BEUTLER, BRUCE
POLTORAK, ALEXANDER

<120> LPS - RESPONSE GENE COMPOSITIONS AND METHODS

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<150> 60/102,392

<151> 1998-09-29

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<170> PatentIn Ver. 2.1

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His Asp Ile Pro Tyr Ser Thr Lys Asn Leu Asp Leu Ser Phe Asn Pro
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Leu Lys Ile Leu Arg Ser Tyr Ser Phe Thr Asn Phe Ser Gln Leu Gln
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Trp Leu Asp Leu Ser Arg Cys Glu Ile Glu Thr Ile Glu Asp Lys Ala
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Trp His Gly Leu Asn Gln Leu Ser Thr Leu Val Leu Thr Gly Asn Pro
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Ile Lys Ser Phe Ser Pro Gly Ser Phe Ser Gly Leu Thr Asn Leu Glu
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Asn Leu Val Ala Val Glu Thr Lys Met Thr Ser Leu Glu Gly Phe His
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Ile His Ser Phe Lys Leu Pro Glu Tyr Phe Ser Asn Leu Thr Asn Leu
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Glu His Val Asp Leu Ser Tyr Asn Tyr Ile Gln Thr Ile Ser Val Lys
180 185 190

Asp Leu Gln Phe Leu Arg Glu Asn Pro Gln Val Asn Leu Ser Leu Asp
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Ile Arg Leu His Glu Leu Thr Leu Arg Ser Asn Phe Asn Ser Ser Asn
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Val Leu Lys Met Cys Leu Gln Asn Met Thr Gly Leu His Val His Arg

245 250 255

Leu Ile Leu Gly Glu Phe Lys Asn Glu Arg Asn Leu Glu Ser Phe Asp
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Arg Ser Val Met Glu Gly Leu Cys Asn Val Ser Ile Asp Glu Phe Arg
275 280 285

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Leu Ala Asn Ile Ser Ala Met Ser Phe Thr Gly Val His Ile Lys His
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Ala Leu Pro Ser Leu Arg Tyr Leu Asp Leu Ser Arg Asn Ala Met Ser
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Phe Arg Gly Cys Cys Ser Tyr Ser Asp Phe Gly Thr Asn Asn Leu Lys
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Tyr Leu Asp Leu Ser Phe Asn Gly Val Ile Leu Met Ser Ala Asn Phe
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Met Gly Leu Glu Glu Leu Glu Tyr Leu Asp Phe Gln His Ser Thr Leu
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Lys Lys Val Thr Glu Phe Ser Val Phe Leu Ser Leu Glu Lys Leu Leu
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Tyr Leu Asp Ile Ser Tyr Thr Asn Thr Lys Ile Asp Phe Asp Gly Ile
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Phe Leu Gly Leu Ile Ser Leu Asn Thr Leu Lys Met Ala Gly Asn Ser
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Phe Lys Asp Asn Thr Leu Ser Asn Val Phe Thr Asn Thr Asn Leu
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Thr Phe Leu Asp Leu Ser Lys Cys Gln Leu Glu Gln Ile Ser Arg Gly

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505

510

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Asn Leu Leu Phe Leu Asp Pro Ser His Tyr Lys Gln Leu Tyr Ser Leu
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Arg Thr Leu Asp Cys Ser Phe Asn Arg Ile Glu Thr Ser Lys Gly Ile
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Asp Gln Lys Met Phe Leu Val Asn Val Glu Gln Met Lys Cys Ala Ser
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Cys Tyr Ile Tyr Lys Thr Ile Ile Ser Val Ser Val Val Ser Val Leu
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Glu Leu Val Lys Asn Leu Glu Glu Gly Val Pro Arg Phe Gln Leu Cys
690 695 700

Leu His Tyr Arg Asp Phe Ile Pro Gly Val Ala Ile Ala Ala Asn Ile
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Ile Gln Glu Gly Phe His Lys Ser Arg Lys Val Ile Val Val Ser
725 730 735

Arg His Phe Ile Gln Ser Arg Trp Cys Ile Phe Glu Tyr Glu Ile Ala
740 745 750

Gln Thr Trp Gln Phe Leu Ser Ser Arg Ser Gly Ile Ile Phe Ile Val

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Gly Arg His Ile Phe Trp Arg Arg Leu Lys Lys Ala Leu Leu Asp Gly		
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<400> 47

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Trp Ile Lys Asp Gln Arg Gln Leu Leu Val Glu Val Glu Arg Met Glu
595 600 605

Cys Ala Thr Pro Ser Asp Lys Gln Gly Met Pro Val Leu Ser Leu Asn
610 615 620

Ile Thr Cys Gln Met Asn Lys Thr Ile Ile Gly Val Ser Val Leu Ser

625	630	635	640
Val Leu Val Val Ser Val Val Ala Val Leu Val Tyr Lys Phe Tyr Phe			
645	650	655	
His Leu Met Leu Leu Ala Gly Cys Ile Lys Tyr Gly Arg Gly Glu Asn			
660	665	670	
Ile Tyr Asp Ala Phe Val Ile Tyr Ser Ser Gln Asp Glu Asp Trp Val			
675	680	685	
Arg Asn Glu Leu Val Lys Asn Leu Glu Glu Gly Val Pro Pro Phe Gln			
690	695	700	
Leu Cys Leu His Tyr Arg Asp Phe Ile Pro Gly Val Ala Ile Ala Ala			
705	710	715	720
Asn Ile Ile His Glu Gly Phe His Lys Ser Arg Lys Val Ile Val Val			
725	730	735	
Val Ser Gln His Phe Ile Gln Ser Arg Trp Cys Ile Phe Glu Tyr Glu			
740	745	750	
Ile Ala Gln Thr Trp Gln Phe Leu Ser Ser Arg Ala Gly Ile Ile Phe			
755	760	765	
Ile Val Leu Gln Lys Val Glu Lys Thr Leu Leu Arg Gln Gln Val Glu			
770	775	780	
Leu Tyr Arg Leu Leu Ser Arg Asn Thr Tyr Leu Glu Trp Glu Asp Ser			
785	790	795	800
Val Leu Gly Arg His Ile Phe Trp Arg Arg Leu Arg Lys Ala Leu Leu			
805	810	815	
Asp Gly Lys Ser Trp Asn Pro Glu Gly Thr Val Gly Thr Gly Cys Asn			
820	825	830	
Trp Gln Glu Ala Thr Ser Ile			
835			

<210> 99
 <211> 835
 <212> PRT
 <213> Mus musculus

<400> 99

Met Met Pro Pro Trp Leu Leu Ala Arg Thr Leu Ile Met Ala Leu Phe
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Phe Ser Cys Leu Thr Pro Gly Ser Leu Asn Pro Cys Ile Glu Val Val
 20 25 30

Pro Asn Ile Thr Tyr Gln Cys Met Asp Gln Lys Leu Ser Lys Val Pro
 35 40 45

Asp Asp Ile Pro Ser Ser Thr Lys Asn Ile Asp Leu Ser Phe Asn Pro
 50 55 60

Leu Lys Ile Leu Lys Ser Tyr Ser Phe Ser Asn Phe Ser Glu Leu Gln
 65 70 75 80

Trp Leu Asp Leu Ser Arg Cys Glu Ile Glu Thr Ile Glu Asp Lys Ala
 85 90 95

Trp His Gly Leu His His Leu Ser Asn Leu Ile Leu Thr Gly Asn Pro
 100 105 110

Ile Gln Ser Phe Ser Pro Gly Ser Phe Ser Gly Leu Thr Ser Leu Glu
 115 120 125

Asn Leu Val Ala Val Glu Thr Lys Leu Ala Ser Leu Glu Ser Phe Pro
 130 135 140

Ile Gly Gln Leu Ile Thr Leu Lys Lys Leu Asn Val Ala His Asn Phe
 145 150 155 160

Ile His Ser Cys Lys Leu Pro Ala Tyr Phe Ser Asn Leu Thr Asn Leu
 165 170 175

Val His Val Asp Leu Ser Tyr Asn Tyr Ile Gln Thr Ile Thr Val Asn
 180 185 190

Asp Leu Gln Phe Leu Arg Glu Asn Pro Gln Val Asn Leu Ser Leu Asp
 195 200 205

Met Ser Leu Asn Pro Ile Asp Phe Ile Gln Asp Gln Ala Phe Gln Gly
 210 215 220

Ile Lys Leu His Glu Leu Thr Leu Arg Gly Asn Phe Asn Ser Ser Asn
 225 230 235 240

Ile Met Lys Thr Cys Leu Gln Asn Leu Ala Gly Leu His Val His Arg
 245 250 255

Leu Ile Leu Gly Glu Phe Lys Asp Glu Arg Asn Leu Glu Ile Phe Glu
260 265 270

Pro Ser Ile Met Glu Gly Leu Cys Asp Val Thr Ile Asp Glu Phe Arg
275 280 285

Leu Thr Tyr Thr Asn Asp Phe Ser Asp Asp Ile Val Lys Phe His Cys
290 295 300

Leu Ala Asn Val Ser Ala Met Ser Leu Ala Gly Val Ser Ile Lys Tyr
305 310 315 320

Leu Glu Asp Val Pro Lys His Phe Lys Trp Gln Ser Leu Ser Ile Ile
325 330 335

Arg Cys Gln Leu Lys Gln Phe Pro Thr Leu Asp Leu Pro Phe Leu Lys
340 345 350

Ser Leu Thr Leu Thr Met Asn Lys Gly Ser Ile Ser Phe Lys Lys Val
355 360 365

Ala Leu Pro Ser Leu Ser Tyr Leu Asp Leu Ser Arg Asn Ala Leu Ser
370 375 380

Phe Ser Gly Cys Cys Ser Tyr Ser Asp Leu Gly Thr Asn Ser Leu Arg
385 390 395 400

His Leu Asp Leu Ser Phe Asn Gly Ala Ile Ile Met Ser Ala Asn Phe
405 410 415

Met Gly Leu Glu Glu Leu Gln His Leu Asp Phe Gln His Ser Thr Leu
420 425 430

Lys Arg Val Thr Glu Phe Ser Ala Phe Leu Ser Leu Glu Lys Leu Leu
435 440 445

Tyr Leu Asp Ile Ser Tyr Thr Asn Thr Lys Ile Asp Phe Asp Gly Ile
450 455 460

Phe Leu Gly Leu Thr Ser Leu Asn Thr Leu Lys Met Ala Gly Asn Ser
465 470 475 480

Phe Lys Asp Asn Thr Leu Ser Asn Val Phe Ala Asn Thr Thr Asn Leu
485 490 495

Thr Phe Leu Asp Leu Ser Lys Cys Gln Leu Glu Gln Ile Ser Trp Gly
500 505 510

Val Phe Asp Thr Leu His Arg Leu Gln Leu Leu Asn Met Ser His Asn
515 520 525

Asn Leu Leu Phe Leu Asp Ser Ser His Tyr Asn Gln Leu Tyr Ser Leu
530 535 540

Ser Thr Leu Asp Cys Ser Phe Asn Arg Ile Glu Thr Ser Lys Gly Ile
545 550 555 560

Leu Gln His Phe Pro Lys Ser Leu Ala Phe Phe Asn Leu Thr Asn Asn
565 570 575

Ser Val Ala Cys Ile Cys Glu His Gln Lys Phe Leu Gln Trp Val Lys
580 585 590

Glu Gln Lys Gln Phe Leu Val Asn Val Glu Gln Met Thr Cys Ala Thr
595 600 605

Pro Val Glu Met Asn Thr Ser Leu Val Leu Asp Phe Asn Asn Ser Thr
610 615 620

Cys Tyr Met Tyr Lys Thr Ile Ile Ser Val Ser Val Val Ser Val Ile
625 630 635 640

Val Val Ser Thr Val Ala Phe Leu Ile Tyr His Phe Tyr Phe His Leu
645 650 655

Ile Leu Ile Ala Gly Cys Lys Lys Tyr Ser Arg Gly Glu Ser Ile Tyr
660 665 670

Asp Ala Phe Val Ile Tyr Ser Ser Gln Asn Glu Asp Trp Val Arg Asn
675 680 685

Glu Leu Val Lys Asn Leu Glu Glu Gly Val Pro Arg Phe His Leu Cys
690 695 700

Leu His Tyr Arg Asp Phe Ile Pro Gly Val Ala Ile Ala Ala Asn Ile
705 710 715 720

Ile Gln Glu Gly Phe His Lys Ser Arg Lys Val Ile Val Val Ser
725 730 735

Arg His Phe Ile Gln Ser Arg Trp Cys Ile Phe Glu Tyr Glu Ile Ala
740 745 750

Gln Thr Trp Gln Phe Leu Ser Ser Arg Ser Gly Ile Ile Phe Ile Val
755 760 765

Leu Glu Lys Val Glu Lys Ser Leu Leu Arg Gln Gln Val Glu Leu Tyr
770 775 780

Arg Leu Leu Ser Arg Asn Thr Tyr Leu Glu Trp Glu Asp Asn Pro Leu
785 790 795 800

Gly Arg His Ile Phe Trp Arg Arg Leu Lys Asn Ala Leu Leu Asp Gly
805 810 815

Lys Ala Ser Asn Pro Glu Gln Thr Ala Glu Glu Gln Glu Thr Ala
820 825 830

Thr Trp Thr
835

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<212> DNA

<213> Mus musculus

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31

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<400> 104
Met Met Pro Pro Trp Leu Leu Ala Arg Thr Leu Ile Met Ala Leu Phe
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Phe Ser Cys Leu Thr Pro Gly Ser Leu Asn Pro Cys Ile Glu Val Val
20 25 30

Pro Asn Ile Thr Tyr Gln Cys Met Asp Gln Lys Leu Ser Lys Val Pro
35 40 45

Asp Asp Ile Pro Ser Ser Thr Lys Asn Ile Asp Leu Ser Phe Asn Pro
50 55 60

Leu Lys Ile Leu Lys Ser Tyr Ser Phe Ser Asn Phe Ser Glu Leu Gln
65 70 75 80

Trp Leu Asp Leu Ser Arg Cys Glu Ile Glu Thr Ile Glu Asp Lys Ala
85 90 95

Trp His Gly Leu His His Leu Ser Asn Leu Ile Leu Thr Gly Asn Pro
100 105 110

Ile Gln Ser Phe Ser Pro Gly Ser Phe Ser Gly Leu Thr Ser Leu Glu
115 120 125

Asn Leu Val Ala Val Glu Thr Lys Leu Ala Ser Leu Glu Ser Phe Pro
130 135 140

Ile Gly Gln Leu Ile Thr Leu Lys Lys Leu Asn Val Ala His Asn Phe
145 150 155 160

Ile His Ser Cys Lys Leu Pro Ala Tyr Phe Ser Asn Leu Thr Asn Leu
165 170 175

Val His Val Asp Leu Ser Tyr Asn Tyr Ile Gln Thr Ile Thr Val Asn
180 185 190

Asp Leu Gln Phe Leu Arg Glu Asn Pro Gln Val Asn Leu Ser Leu Asp
195 200 205

Met Ser Leu Asn Pro Ile Asp Phe Ile Gln Asp Gln Ala Phe Gln Gly
210 215 220

Ile Lys Leu His Glu Leu Thr Leu Arg Gly Asn Phe Asn Ser Ser Asn
225 230 235 240

Ile Met Lys Thr Cys Leu Gln Asn Leu Ala Gly Leu His Val His Arg
245 250 255

Leu Ile Leu Gly Glu Phe Lys Asp Glu Arg Asn Leu Glu Ile Phe Glu
260 265 270

Pro Ser Ile Met Glu Gly Leu Cys Asp Val Thr Ile Asp Glu Phe Arg
275 280 285

Leu Thr Tyr Thr Asn Asp Phe Ser Asp Asp Ile Val Lys Phe His Cys
290 295 300

Leu Ala Asn Val Ser Ala Met Ser Leu Ala Gly Val Ser Ile Lys Tyr
305 310 315 320

Leu Glu Asp Val Pro Lys His Phe Lys Trp Gln Ser Leu Ser Ile Ile
325 330 335

Arg Cys Gln Leu Lys Gln Phe Pro Thr Leu Asp Leu Pro Phe Leu Lys
340 345 350

Ser Leu Thr Leu Thr Met Asn Lys Gly Ser Ile Ser Phe Lys Lys Val
355 360 365

Ala Leu Pro Ser Leu Ser Tyr Leu Asp Leu Ser Arg Asn Ala Leu Ser
370 375 380

Phe Ser Gly Cys Cys Ser Tyr Ser Asp Leu Gly Thr Asn Ser Leu Arg
385 390 395 400

His Leu Asp Leu Ser Phe Asn Gly Ala Ile Ile Met Ser Ala Asn Phe
405 410 415

Met Gly Leu Glu Glu Leu Gln His Leu Asp Phe Gln His Ser Thr Leu
420 425 430

Lys Arg Val Thr Glu Phe Ser Ala Phe Leu Ser Leu Glu Lys Leu Leu
435 440 445

Tyr Leu Asp Ile Ser Tyr Thr Asn Thr Lys Ile Asp Phe Asp Gly Ile
450 455 460

Phe Leu Gly Leu Thr Ser Leu Asn Thr Leu Lys Met Ala Gly Asn Ser
465 470 475 480

Phe Lys Asp Asn Thr Leu Ser Asn Val Phe Ala Asn Thr Thr Asn Leu
485 490 495

Thr Phe Leu Asp Leu Ser Lys Cys Gln Leu Glu Gln Ile Ser Trp Gly
500 505 510

Val Phe Asp Thr Leu His Arg Leu Gln Leu Leu Asn Met Ser His Asn
515 520 525

Asn Leu Leu Phe Leu Asp Ser Ser His Tyr Asn Gln Leu Tyr Ser Leu
530 535 540

Ser Thr Leu Asp Cys Ser Phe Asn Arg Ile Glu Thr Ser Lys Gly Ile
545 550 555 560

Leu Gln His Phe Pro Lys Ser Leu Ala Phe Phe Asn Leu Thr Asn Asn
565 570 575

Ser Val Ala Cys Ile Cys Glu His Gln Lys Phe Leu Gln Trp Val Lys
580 585 590

Glu Gln Lys Gln Phe Leu Val Asn Val Glu Gln Met Thr Cys Ala Thr
595 600 605

Pro Val Glu Met Asn Thr Ser Leu Val Leu Asp Phe Asn Asn Ser Thr
610 615 620

Cys Tyr Met Tyr Lys Thr Ile Ile Ser Val Ser Val Val Ser Val Ile
625 630 635 640

Val Val Ser Thr Val Ala Phe Leu Ile Tyr His Phe Tyr Phe His Leu
645 650 655

Ile Leu Ile Ala Gly Cys Lys Tyr Ser Arg Gly Glu Ser Ile Tyr
660 665 670

Asp Ala Phe Val Ile Tyr Ser Ser Gln Asn Glu Asp Trp Val Arg Asn
675 680 685

Glu Leu Val Lys Asn Leu Glu Glu Gly Val Pro Arg Phe His Leu Cys
690 695 700

Leu His Tyr Arg Asp Phe Ile His Gly Val Ala Ile Ala Ala Asn Ile
705 710 715 720

Ile Gln Glu Gly Phe His Lys Ser Arg Lys Val Ile Val Val Val Ser
725 730 735

Arg His Phe Ile Gln Ser Arg Trp Cys Ile Phe Glu Tyr Glu Ile Ala
740 745 750

Gln Thr Trp Gln Phe Leu Ser Ser Arg Ser Gly Ile Ile Phe Ile Val
755 760 765

Leu Glu Lys Val Glu Lys Ser Leu Leu Arg Gln Gln Val Glu Leu Tyr
770 775 780

Arg Leu Leu Ser Arg Asn Thr Tyr Leu Glu Trp Glu Asp Asn Pro Leu
785 790 795 800

Gly Arg His Ile Phe Trp Arg Arg Leu Lys Asn Ala Leu Leu Asp Gly
805 810 815

Lys Ala Ser Asn Pro Glu Gln Thr Ala Glu Glu Glu Gln Glu Thr Ala
820 825 830

Thr Trp Thr
835